

Heindel and Noyes

P.O. Box 64709 Burlington, Vermont 05402-4709

- Consulting Hydrogeologists
- Engineers
- Environmental Scientists

802-658-0820

Fax 802-860-1014

Feb. 12, 1997

Mr. Chuck Schwer
Sites Management Section
Agency of Natural Resources
103 South Main St.
Waterbury, Vermont 05671-0404


Re: Site No. 96-2066

Dear Chuck,

Enclosed please find our Subsurface Investigation report for the Franklin Lamoille Bank.

Please feel free to call with any questions you may have.

Sincerely,

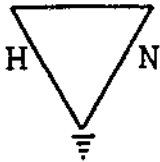

Jeffrey Noyes
Chief Hydrogeologist

JEN:rr

Enclosure

cc: James Gadue
Bank North Group
PO Box 366
Burlington, VT
05402-0366

FEB 14 10 26 AM '97



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**FRANKLIN LAMOILLE BANK
PLAZA BRANCH
St. Albans, Vermont**

SUBSURFACE INVESTIGATION

RECEIVED
FEB 14 10 29 AM '97

Prepared by:

Heindel and Noyes

Prepared for:

 **Banknorth Group, Inc.**

January 31, 1997

**FRANKLIN LAMOILLE BANK
PLAZA BRANCH
St. Albans, Vermont**

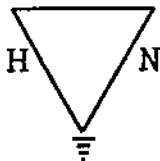
SUBSURFACE INVESTIGATION

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FRANKLIN LAMOILLE BANK PLAZA BRANCH St. Albans, Vermont

SUBSURFACE INVESTIGATION

1.0 INTRODUCTION

The following report summarizes the findings of Heindel and Noyes' (H&N) subsurface investigation of the Franklin Lamoille Bank Plaza Branch facility located in St. Albans, Vermont. This report was preceded by a Tank Pull Investigation Report dated October 18, 1996¹. This project was completed under the Site Expressway Notification process.

H&N first identified soil and groundwater contamination during a sub-surface investigation in 1995². Data collected during this investigation suggested that the underground storage tank (UST) located at the facility was leaking. H&N subsequently oversaw the removal of the 1,000-gallon No. 2 heating oil UST on September 10, 1996. During the UST removal, petroleum contaminated soils were identified. Based on the 1995 subsurface investigation results, and the contamination observed during the 1996 UST removal, H&N recommended an array of groundwater quality monitor wells be installed.

2.0 SUBSURFACE INVESTIGATION

On December 17, 1996, H&N oversaw the installation of four groundwater quality monitor wells. Wells were installed at depths from 8.5 to 10 feet below ground surface (bgs). Well logs are included in Appendix 5.

¹ Franklin Lamoille Bank-Tank Pull Investigation, October 18, 1996. H&N Report #3717

² Franklin Lamoille Bank-Plaza Branch-LUST, July 24, 1995. H&N Report #2766

2.1 Site Geology and Groundwater

The subject site slopes moderately to the west. Surface water drainage is to the northwest to Stevens Brook, a Lake Champlain tributary. Soils on site consist of medium sand. The shallow aquifer was encountered at depths of 3.4 to 3.6 feet bgs.

The direction of groundwater likely is to the northwest. Groundwater levels recorded (3.0 to 3.5 feet below ground surface) on December 17, 1996 were substantially higher than those recorded previously due to the wetter than average conditions preceding the field work. During the removal of the UST, groundwater was not encountered to a depth of six feet bgs. H&N's investigation in 1995 determined groundwater was 6.7 feet bgs. Groundwater elevation data and a groundwater elevation map are included in Appendix 4.

2.2 Groundwater Sampling

The four monitor wells were developed and sampled on December 17, 1996. A summary of the lab results is included in the table below. Tables summarizing lab data by date and well are included in Appendix 3; laboratory results are included in Appendix 2.

FRANKLIN LAMOILLE BANK GROUNDWATER QUALITY SUMMARY (ppb)					
(Groundwater samples obtained on December 17, 1996)					
Parameter	Enforcement Standard ¹	MW-1	MW-2	MW-3	MW-4
Benzene	5	1.0	1.1	<1	<1
Ethylbenzene	680	<1	<1	<1	<1
Toluene	2420	<1	<1	<1	<1
Xylenes	400	<1	<1	<1	<1
Total BTEX	—	1.0	1.1	<1	<1
MTBE	40 ²	<1	<1	<1	<1
UIP	—	5	5	0	0
NOTES: All concentrations are in ug/l. ¹ Enforcement Standard = Chapter 12, Vermont Groundwater Standards, September 1988. ² EPA maximum contaminant level					

Laboratory results indicate low level contamination is present in monitor wells MW-1 and MW-2. These levels are below the Groundwater Enforcement Standard of 5 ppb³. Because monitor well MW-1 is upgradient of the former UST location, benzene contamination at this well is likely a result of fuel releases in the upgradient parking lot.

3.0 SENSITIVE RECEPTOR SURVEY

As part of this investigation, H&N performed a sensitive receptor survey downgradient of the former UST location. The survey involved the identification of drinking water wells, neighboring dwellings, or other receptors that may have been affected by contamination originating at the subject site.

No drinking water wells were identified within 0.5 miles of the subject site.

A structure to the north (Sirloin Jims/Hair Dresser/Furniture Retail) was investigated. No elevated PID readings were observed in the basement. Floor drains in the two rest rooms were also screened and revealed slightly elevated PID readings (i.e., 2.0 and 1.4 ppm). These readings are likely a result of residual cleaning compounds.

A structure immediately to the west (Evinrude) was also investigated. H&N was not able to enter this structure which is currently vacant. A wet well outside of the building was screened with the PID and revealed no elevated readings.

The wetland approximately 75 west of the former UST is also a sensitive receptor. Standing water at the upgradient edge of the wetland had no visible signs of contamination. A water sample from the culvert draining from the parking lot to the east into the wetland was also screened with a PID. No elevated VOCs were observed.

No other sensitive receptors were identified.

³Chapter 12 Vermont Groundwater Protection Rule and Strategy, 9/88

4.0 CONCLUSIONS AND RECOMMENDATIONS

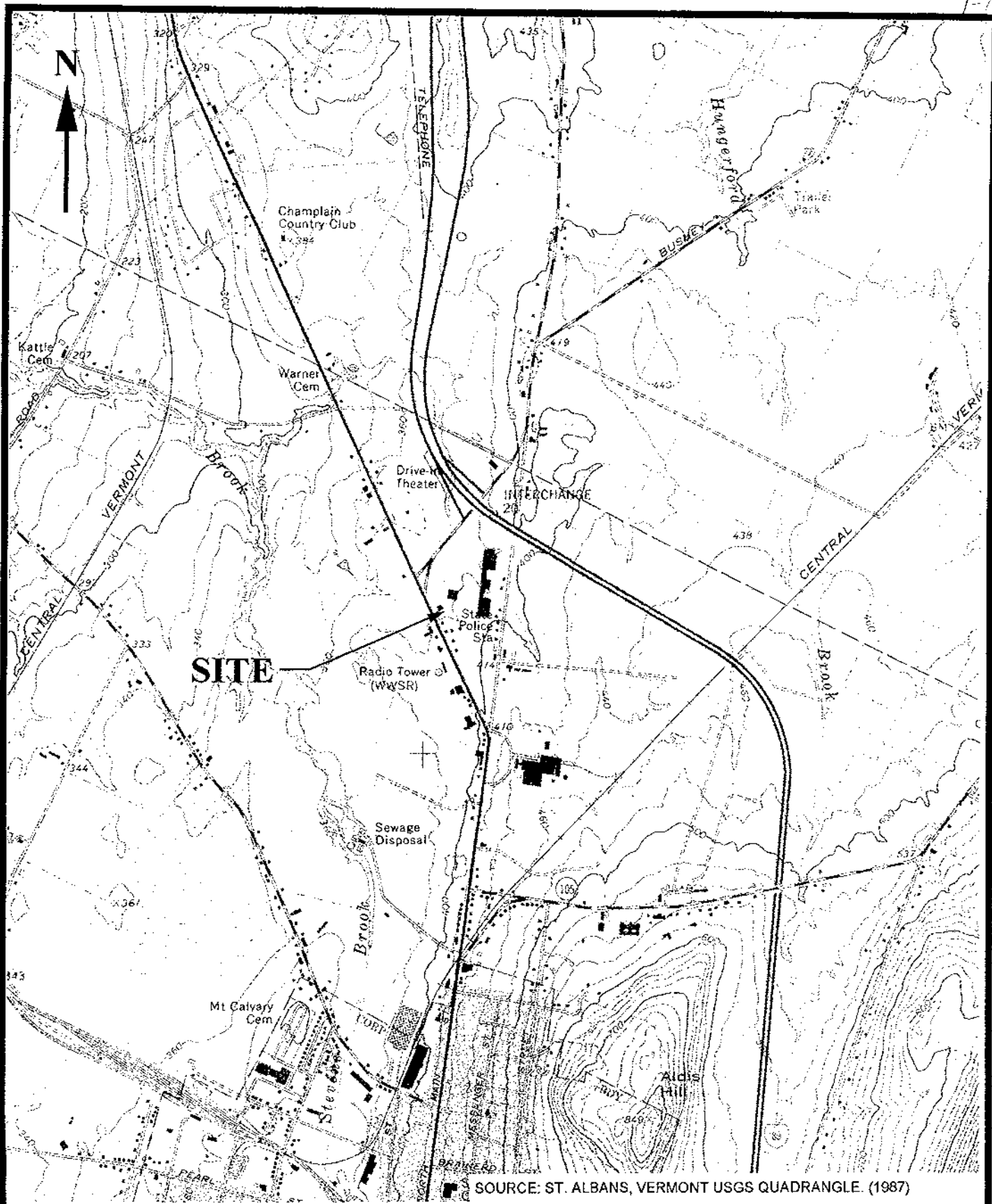
In response to contamination identified during previous soil boring activities and the removal of a 1,000-gallon UST, H&N installed 4 groundwater quality monitoring wells on December 17, 1996. Laboratory analysis of samples collected from the four wells indicated all wells sampled did not exceed the Groundwater Enforcement Standard⁴ for any of the analyzed constituents.

Upgradient monitor well MW-1 had low levels of benzene (i.e., 1.0 ppb). This contamination is likely a result of fuel releases in the upgradient parking lot. Contamination recorded at MW-2 (1.1 ppb benzene) may be a result of contamination from the former UST, or an upgradient source.

Based on observations made during the sensitive receptor survey, and the absence of substantial groundwater contamination, we conclude the receptors identified have not been affected by contamination originating at the subject site.

H&N recommends an additional sampling round of the four existing wells be performed in the spring of 1997 to determine what, if any, continued monitoring of the site is needed. If the spring 1997 testing provides similar results, we will request site closure at that time.

[U:\PMONKSWP\DOCS\BN_FLB.R1]



FRANKLIN LAMOILLE BANK - UST

ST. ALBANS,

VERMONT

SITE LOCATION MAP

SCALE: 1"=2000'

FILE: C:\FLBNKUST\SITEMAP

DATE: JANUARY 15, 1997

PROJECT NO. 96178

DRAWN BY: M. Luman

PROJ. MGR: P. Monks

APPROVED: J. Noyes

Heindel and Noyes

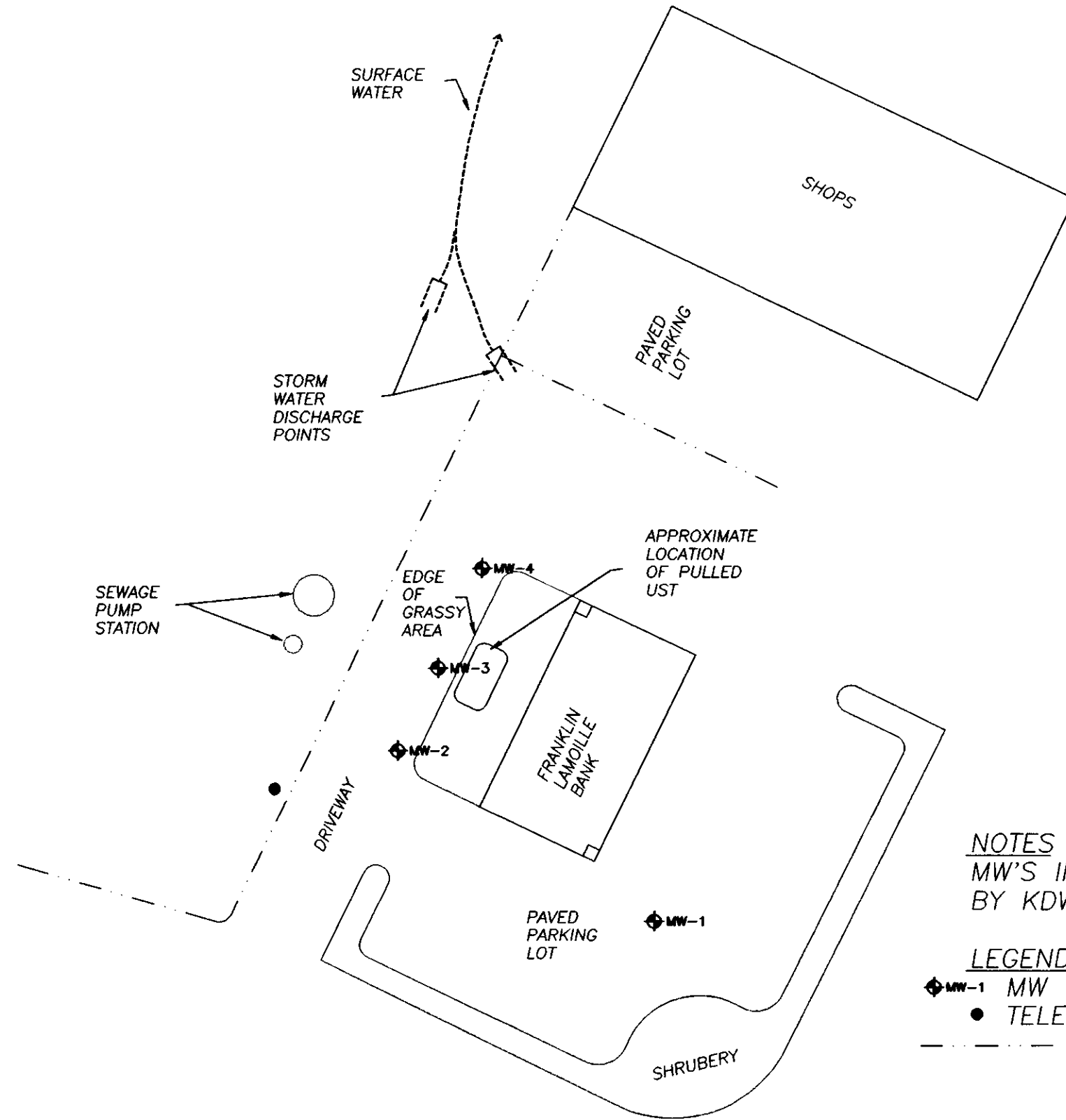


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- Environmental Engineering •

CONSULTING SCIENTISTS AND ENGINEERS

P.O. BOX 64709 - BURLINGTON, VERMONT 05406

PREPARED BY: INFORMATION & VISUALIZATION SERVICES



NOTES
MW'S INSTALLED AND SURVEYED
BY KDW AND AH OF H&N ON 12/17/96

LEGEND
 ◆ MW-1 MW
 ● TELEPHONE POLE
 - - - - - APPROXIMATE LOCATION OF PROPERTY LINE

FRANKLIN LAMOILLE BANK, PH II

ST. ALBANS VERMONT

SITEPLAN

SCALE: 1" = 30' FILE: D:\BANKNORT\SITEPLAN

DATE: DECEMBER 30, 1996

PROJECT NO. 96263

DRAWN BY: K. Bryan

PROJ. MGR: K. Warden

APPROVED: J. Noyes

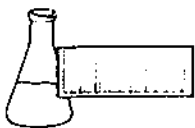
☒ DRAFT ☐ FINAL

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• Environmental Engineering •
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Prepared By:
Information & Visualization Services



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Heindel and Noyes, Inc.
PROJECT NAME: Franklin Lamoille Bank
REPORT DATE: December 26, 1996
DATE SAMPLED: December 17, 1996

PROJECT CODE: HNFL1351
REF.#: 97,991 - 97,994

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

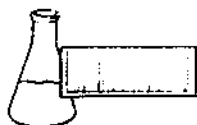
Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Heindel and Noyes, Inc.

PROJECT NAME: Franklin Lamoille Bank

CLIENT PROJ. #: NI

DATE RECEIVED: December 17, 1996

REPORT DATE: December 26, 1996

PROJECT CODE: HNFL1351

Ref. #:	97,991	97,992	97,993	97,994	
Site:	MW-1	MW-2	MW-3	MW-4	
Date Sampled:	12/17/96	12/17/96	12/17/96	12/17/96	
Time Sampled:	3:30	3:35	3:40	3:45	
Sampler:	Hoak/DiPietro	Hoak/DiPietro	Hoak/DiPietro	Hoak/DiPietro	
Date Analyzed:	12/26/96	12/26/96	12/24/96	12/24/96	
UIP Count:	5	5	0	0	
Dil. Factor (%):	100	100	100	100	
Surr % Rec. (%):	101	97	102	97	
Parameter	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)	
Benzene	1.0	1.1	<1	<1	
Chlorobenzene	<1	<1	<1	<1	
1,2-Dichlorobenzene	<1	<1	<1	<1	
1,3-Dichlorobenzene	<1	<1	<1	<1	
1,4-Dichlorobenzene	<1	<1	<1	<1	
Ethylbenzene	<1	<1	<1	<1	
Toluene	<1	<1	<1	<1	
Xylenes	<1	<1	<1	<1	
MTBE	<10	<10	<10	<10	

Note: UIP = Unidentified Peaks TBQ = Trace Below Quantitation NI = Not Indicated



≡ENDYNE, INC.

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

CHAIN-OF-CUSTODY RECORD

20651

Project Name: FRANKLIN LAMOILLE BANK Site Location: ST. ALBANS	Reporting Address: NH 3 IN	Billing Address: NH 3 N
Endyne Project Number: HNFL1351	Company: NH 3 N Contact Name/Phone #: A. HOAK 658-0820	Sampler Name: A. HOAK / K. DIPIETRO Phone #: 658-0820

[illegible]

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time <i>12/17/96 4:50 P.M.</i>
Relinquished by: Signature	Received by: Signature	Date/Time

New York State Project: Yes _____ No _____

Requested Analyses

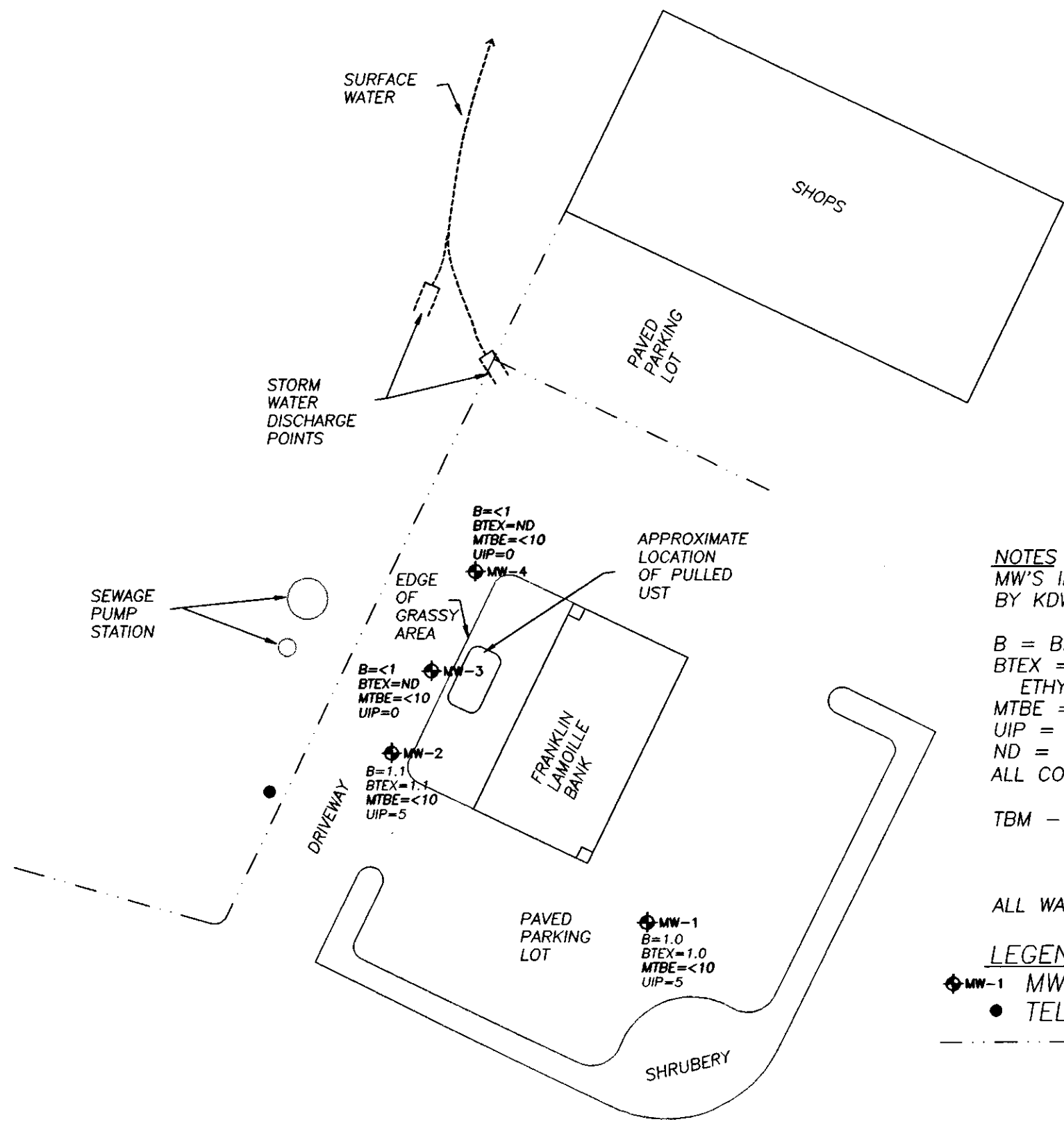
New York State Project: Yes _____ No _____				Requested Analyses							
1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										

Franklin Lamoille Bank
St. Albans, Vermont
December 17, 1996

Summary of Water Quality Sampling
(all concentrations in ug/L, ppb)

Contaminant	Groundwater Monitoring Wells			
	MW-1	MW-2	MW-3	MW-4
Benzene	1.0	1.1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Total BTEX	1.0	1.1	ND	ND
MTBE	<10	<10	<10	<10
UIP _s	5	5	0	0

Note: UIP = Unidentified Peaks ND = None Detected



NOTES
 MW'S INSTALLED AND SURVEYED
 BY KDW AND AH OF H&N ON 12/17/96

B = BENZENE
 BTEX = TOTAL BTEX (BENZENE, TOLUENE,
 ETHYLBENZENE, XYLENES)
 MTBE = METHYL TERT BUTYL ETHYL
 UIP = UNIDENTIFIED PEAKS
 ND = NONE DETECTED
 ALL CONCENTRATIONS ARE IN ppb

TBM - ESTABLISHED ON 12/17/96 AS PK NAIL ON
 TELEPHONE POLE BY K. DIPIETRO AND A. HOAK
 OF H&N. (ELEVATION = 100.00 FT)

ALL WATER TABLE ELEVATIONS IN FEET

LEGEND

◆ MW-1 MW
 ● TELEPHONE POLE
 - - - - - APPROXIMATE LOCATION
 OF PROPERTY LINE

Heindel and Noyes • Hydrogeology • Ecology • • Environmental Engineering • CONSULTING SCIENTISTS AND ENGINEERS P.O. BOX 64709 BURLINGTON, VERMONT 05406-4709		Prepared By: Information & Visualization Services
FRANKLIN LAMOILLE BANK, PH II		
DATE: DECEMBER 30, 1996 PROJECT NO. 96263 DRAWN BY: K. Bryan PROJ. MGR: K. Warden APPROVED: J. Noyes	VERMONT CONTAMINANT CONCENTRATIONS (DECEMBER 17, 1996)	SCALE: 1" = 30' FILE: D:\BANKNOT\ SITEPLAN
ST. ALBANS		DRAFT <input checked="" type="checkbox"/> FINAL <input type="checkbox"/>

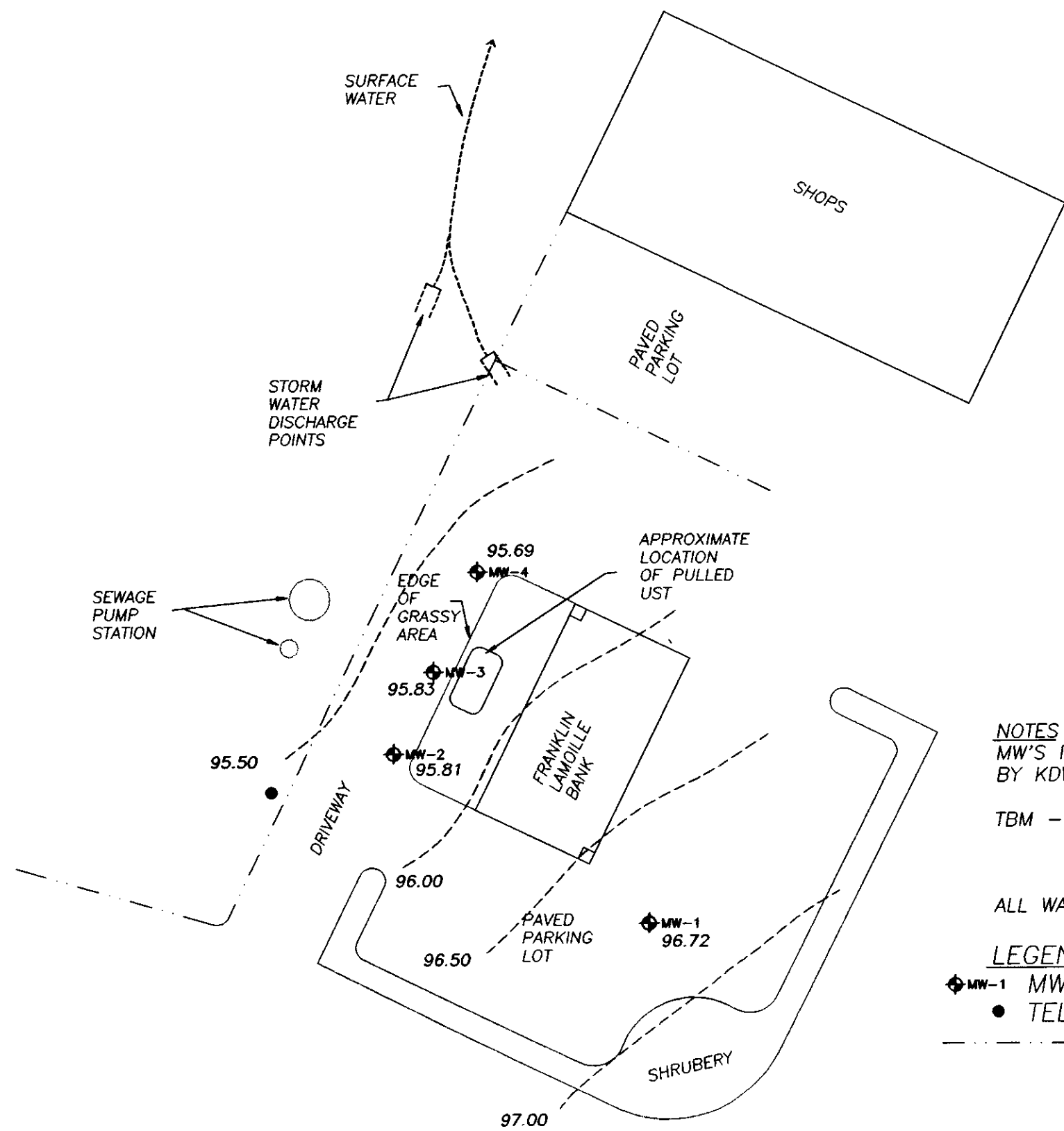
Franklin Lamoille Bank
St. Albans, Vermont

December 17, 1996 Water Table Elevations

Well Location	Top of Pipe Elevation (ft)	Depth to Groundwater (ft btp)	Groundwater Elevation (ft)
MW-1	100.30	3.58	96.72
MW-2	99.41	3.60	95.81
MW-3	99.23	3.40	95.83
MW-4	99.15	3.46	95.69

Notes:

- TBM established on 12/17/96 at PK nail on telephone pole (Elev. 100.00) by K. Dipietro and A. Hoak of H & N.
- btp = below top pipe



NOTES
 MW'S INSTALLED AND SURVEYED
 BY KDW AND AH OF H&N ON 12/17/96

TBM - ESTABLISHED ON 12/17/96 AS PK NAIL ON
 TELEPHONE POLE BY K. DIPIETRO AND A. HOAK
 OF H&N. (ELEVATION = 100.00 FT)

ALL WATER TABLE ELEVATIONS IN FEET

- LEGEND**
- ◆ MW-1 MW
 - TELEPHONE POLE
 - APPROXIMATE LOCATION OF PROPERTY LINE

<h2 style="margin: 0;">FRANKLIN LAMOILLE BANK, PH II</h2>		<h2 style="margin: 0;">Heindel and Noyes</h2> <div style="font-size: small; text-align: center;"> • Hydrogeology • Ecology • • Environmental Engineering • CONSULTING SCIENTISTS AND ENGINEERS </div> <div style="font-size: x-small; text-align: center;"> P.O. BOX 64709 BURLINGTON, VERMONT 05406-4709 </div>	
ST. ALBANS VERMONT		DATE: DECEMBER 30, 1996 PROJECT NO. 96263 DRAWN BY: K. Bryan PROJ. MGR: K. Warden APPROVED: J. Noyes	
GROUNDWATER ELEVATIONS (DECEMBER 17, 1996)		Prepared By: Information & Visualization Services	
SCALE: 1" = 30'		FILE: D:\BANKNOT\ SITEPLAN <input checked="" type="checkbox"/> DRAFT <input type="checkbox"/> FINAL	

5-1

(01AHOAKWPDOCS\FRANKLAM.MW1)

5.2

(U:VAHOAKIWPDOCS\FRANKLAM.MW2)

5-3

(U:\AHOAK\WPDOCS\FRANKLAM.MW3)

5.9

[illegible]